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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,213	09/26/2001	Raleigh L. Cox	16308/94337-00	2015

33222 7590 06/06/2003

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EXAMINER

HRUSKOCI, PETER A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/964,213

Applicant(s)

COX ET AL.

Examiner

Peter A. Hruskoci

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective because: The parent application disclosed on page 1 of the specification should be described as a CIP instead of a foreign application in the declaration.
2. Claims 20-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 20 and 32 are considered incomplete because it is essential that the instant method include a step for reducing nitrate concentration in the wastewater. Claims 21-31 and 33-43 depend from the above claims.
3. Claims 1-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guy et al. in view of Scroggins and Tabata et al. Guy et al. disclose (see col. 2 line 61 through col. 4 line 20) a method for treating wastewater in an apparatus configured to have an aeration zone and quiescent zone substantially as claimed. The claims differ from Guy et al. by reciting that the method reduces nitrate concentration in the wastewater, and includes steps of ceasing gas flow to the aeration zone, intermittently mixing the wastewater in the aeration zone, monitoring the dissolved oxygen level in the aeration zone, and ceasing gas flow when a predetermined dissolve oxygen level has been reached,

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respectively. Scroggins (see col. 8 line 22-63) disclose that it is known in the art of water treatment to utilize a dissolved oxygen probe positioned in an aeration zone to provide dissolved oxygen measurements to a controller for regulating air flow to the aeration zone during an oxic cycle, and terminating air flow during an anoxic cycle. Tabata et al. disclose (see col. 3 line 66 through col. 6 line 48) disclose that it is known in the art to reduce nitrate concentration in wastewater by agitating the wastewater under anoxic conditions. It would have been obvious to one skilled in the art to modify the method of Guy et al. by including the recited steps for ceasing gas flow, mixing and monitoring in view of the teachings of Scroggins and Tabata et al. respectively, to aid in reducing nitrate concentration in the wastewater. The specific type of mixing, mixing periods and intervals, nitrate reduction period, and oxygen levels utilized, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific wastewater treated and results desired, absent a sufficient showing of unexpected results.

4. Claims 1, 11, 20, and 32 properly written to include method steps for using the apparatus recited in the claims of the parent application US Patent 6,332,978, would be allowable.


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (703) 308-3839. The examiner can normally be reached on Monday through Friday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Blaine Copenheaver, can be reached on (703) 308-1261. The fax phone number for this Group is (703) 872-9310 (non-after finals) and 703-872-9311 after finals.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
**Peter A. Hruskoci**  
**Primary Examiner**  
**Art Unit 1724**

P. Hruskoci  
June 5, 2003